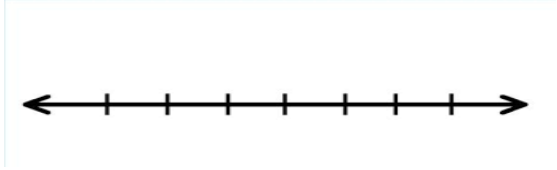
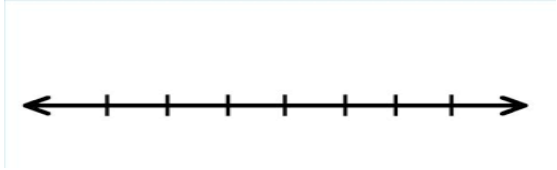
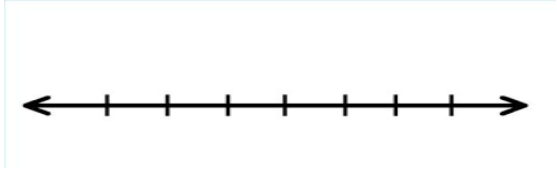



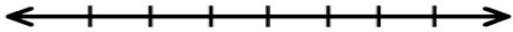
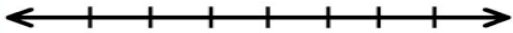
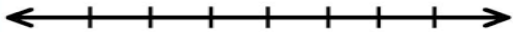


Inequalities Study Sheet

Definitions/Steps	Examples
$<$: points to _____, circle is _____	1. Graph: $a < 5$ 
$>$: points to _____, circle is _____	2. Graph $b > -2$ 
\leq : points to _____, circle is _____	3. Graph $c \leq 10$ 
\geq : points to _____, circle is _____	4. Graph $d \geq -1$ 
If the variable is on the right side of the symbol, switch all three parts.	5. Rewrite: $6 > e$, then graph: 

Definitions/Steps	Examples
<p>How to Determine if a Number is a Solution of an Inequality</p> <p>1) _____ the value into the inequality.</p> <p>2) _____ both sides of the inequality symbol.</p> <p>3) _____ to see if the inequality is _____.</p>	<p>6. Is -3 a solution of the inequality: $2x + 8 > -10$? Show all work.</p>
<p>Steps to Solve Inequalities</p> <p>1. P _____ C _____!</p> <p>2. S _____ A _____</p> <p>3. D _____ M _____</p> <p>*Remember, if you multiply or divide by a _____ number, _____ the inequality symbol!</p> <p>4. Write the solution as an _____.</p> <p>5. Graph the solution on the _____ line.</p>	<p>7. Solve and graph the solution on the number line:</p> <p>$-5(2x + 3) \leq 25$</p> 

Definitions/Steps	Examples
<p>Compound Inequalities:</p> <p>compound inequality: two or more _____ graphed together</p> <p>compound inequality with “and”: the solution represents the _____ of the inequalities: where both _____ are true</p> <p>To Solve Compound Inequalities with “and”:</p> <ol style="list-style-type: none"> 1. Use the _____ property to eliminate parentheses (if necessary). 2. SADM - to all THREE parts of the _____ inequality! 3. Graph the inequality with the area in between the two values shaded. 	<p>8. Graph the compound inequality:</p> $-1 < f \leq 2$  <p>9. Graph the compound inequality:</p> $g < -3 \text{ OR } g \geq 0$  <p>10. Solve and graph the solution on the number line:</p> $-10 \leq 5(x + 1) < 5$ 

To Solve Compound Inequalities with “or”:

1. Solve each _____.

2. Write the

_____ as TWO inequalities connected with the word “or.”

3. To graph:

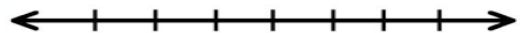
- If the arrows are pointing towards each other, the solution is _____.

Shade the whole number line.

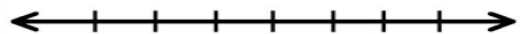
- If the arrows are pointing in _____ directions, leave the graph this way.

11. Solve and graph the solution on the number line:

$$2y < 4 \quad \text{OR} \quad y + 3 \geq 9$$



12. $-6z \leq 12$ OR $4 + z < 5$



Translating English into Inequalities
Add English phrases for each symbol.

$<$	$>$
\leq	\geq